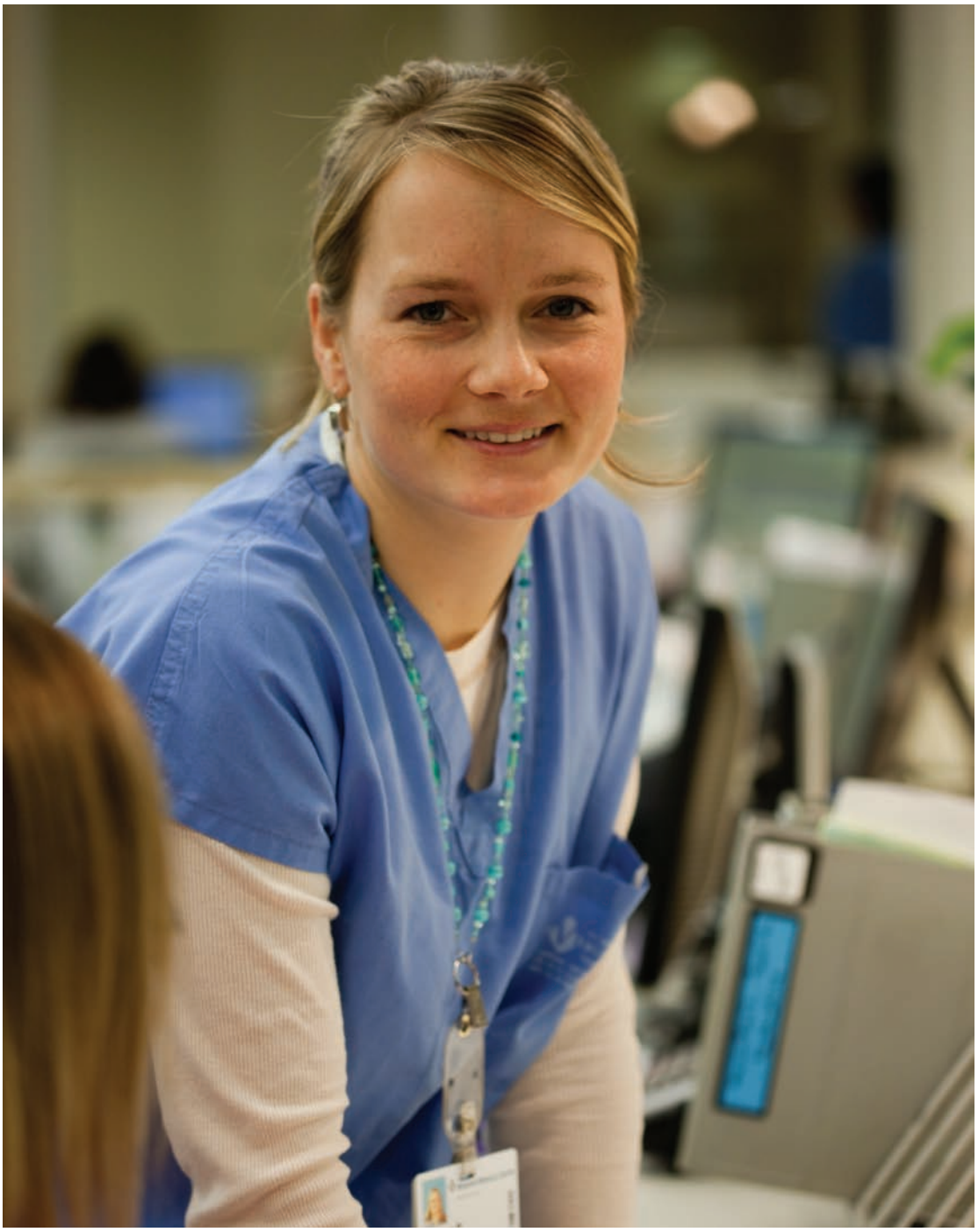
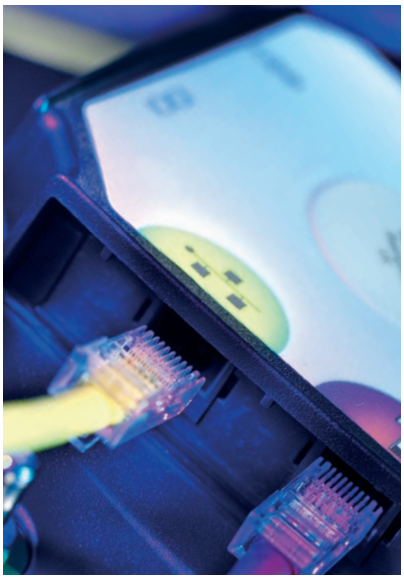
Alaris® Gateway Workstation

Directions For Use
EN





CE

CareFusion

Contents

Introduction

The Alaris® Gateway Workstation (herein after referred to as "Workstation") has been designed as a modular system providing a communications gateway between an Alaris® Infusion Pump (herein after referred to as "pump") and any Patient Data Management System (PDMS), Patient Monitoring (PM) System or Clinical Information System (CIS) that requires access to the infusion data retained within the pump.

Features:

- Central management system for multiple pumps
- Medical Device Interface (MDI) – a unique mounting mechanism providing data communications and mains power to the pump
- Reduced cable clutter with the use of a single AC power inlet
- Simple to set up with adaptable modular design
- Efficient organisation of multiple infusion lines and configurations
- Battery back-up in the event of power supply interruption
- Optional high visibility beacon assists with the location of pumps in an alarm state
- Nurse call interface for all pumps attached to the Workstation
- Software running on the Workstation allows remote access

The Workstation supports optional upgrades to enhance the data communication interfaces and to support software for connections to such client / server systems.

Intended Use:

The Alaris® Gateway Workstation is intended to be used to provide mounting, power and communications support to the Alaris® Infusion Pumps range within the operating environment specified in this Directions For Use (DFU). In such environments, the device may be exposed to the following range of therapies:

Fluid therapy, blood transfusions, parenteral feeding, drug therapy, chemotherapy, dialysis and anaesthesia. The Alaris® Gateway Workstation is designed not to directly impact or affect the infusion delivery process.

Data can be accessed and the software installed on the Workstation can be configured from a client PC using a standard Web browser; this may be performed over an Ethernet connection or by directly linking to the Workstation.

The software is provided under and is subject to a licence from CareFusion.

The Asena® brand name has been recently changed to the Alaris® brand name. This change in brand name has no effect on the intended use or functionality of the product.

About this Manual

The user must be thoroughly familiar with the Workstation described in this manual prior to use.

Please refer to the relevant Directions For Use for correct operation of the pumps. Directions for Use for software installed on the Workstation can be accessed from a client PC using a standard Web browser.

All illustrations used in this manual show typical settings and values which may be used in setting up the functions of the Workstation. These settings and values are for illustrative use only. The complete range of settings and values are shown in the Specifications section.

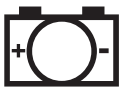
The illustrations in this DFU show example configurations and equipment that might not be available to all markets and regions. Please contact the local affiliate office for further information.

Warnings and Cautions

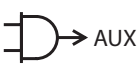
The Warning heading alerts the user to a potentially serious outcome (death, injury or serious adverse events) to the patient or user.

The Caution heading alerts the user to take special care for the effective use of the Workstation or software.

Controls and Indicators

Symbol	Description
	**ON/OFF Button** - Press once to switch the Workstation on. Press and hold for 1 second to switch the Workstation off. In the event that the system needs to be reset, depress and hold for at least 4 seconds, then press again to switch the Workstation on.
	**Battery Indicator** - When illuminated the Workstation is operating from the internal battery; when flashing the battery power is depleted.
	**AC Power Indicator** - When illuminated the Workstation is connected to the AC power supply and the battery is being charged.
A B	**'A' Status Indicator** - Provides a visual indication that the software is operational. **'B' Status Indicator** - Provides a visual indication that the network is operational.
	**'ON' Status Indicator** - When illuminated the Workstation is operational.
	**System Fault Indicator** – The Workstation will illuminate this indicator when an internal fault is present and detected. (Consult accompanying documents for further information).

Symbol Definitions

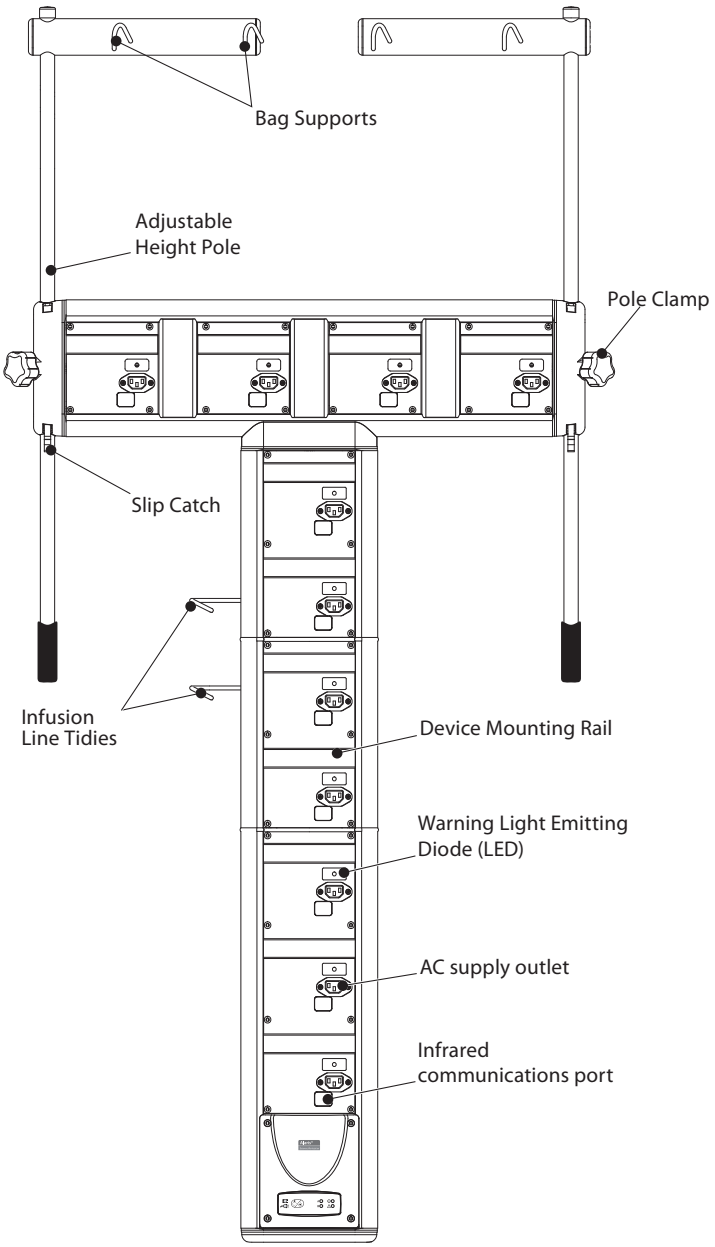
Symbol	Description	Symbol	Description
	Nurse call Connector		Attention (Consult accompanying documents)
	RS232 Connector		Potential Equalisation (PE) Connector
	Auxiliary Connector	IPX1	Protected against vertically falling drops of water
	Interface Device, General (Barcode Reader Connector)		Alternating Current
	Ethernet Network Connector	CE	Device complies with the requirements of Council Directive 93/42/EEC as amended by 2007/47/EC.
	Mains Inlet		Date of Manufacture
 AUX	Mains Outlet		Manufacturer
	This equipment contains an RF transmitter (where fitted)		Not for Municipal Waste
	Fuse Rating	EC REP	Authorised representative in the European Community

Features of the Workstation

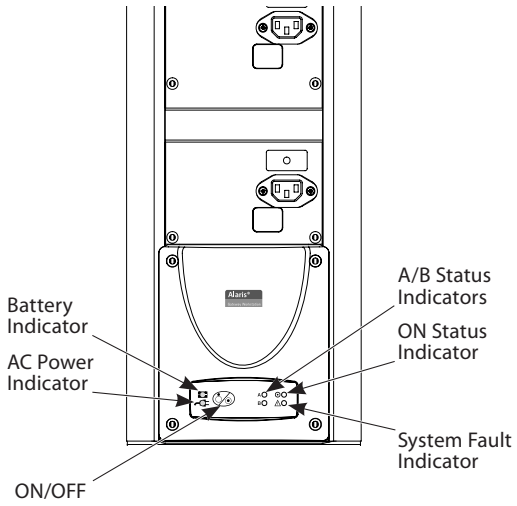
Modular Design

The Workstation is a modular design that allows for future expansion of the number and positions of MDI tiles available. The Base Module comprises 3 MDI tiles with modules of 2 MDI tiles expanding the vertical configuration. Horizontal T-pieces of 2, 3 or 4 MDI tiles may be added to accommodate pumps and fluid bag hangers, as required. The Workstation can only be modified by a qualified service engineer.

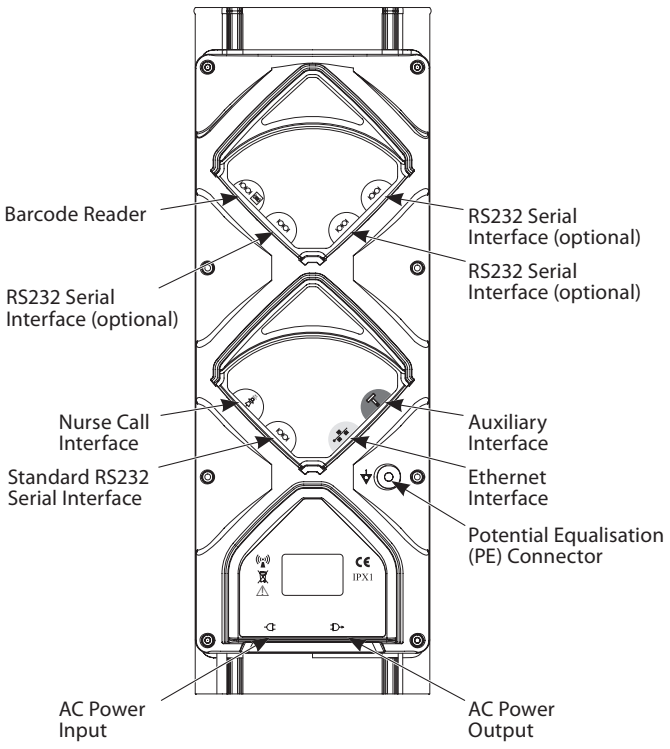
Configuration 80203UNSxx-74:



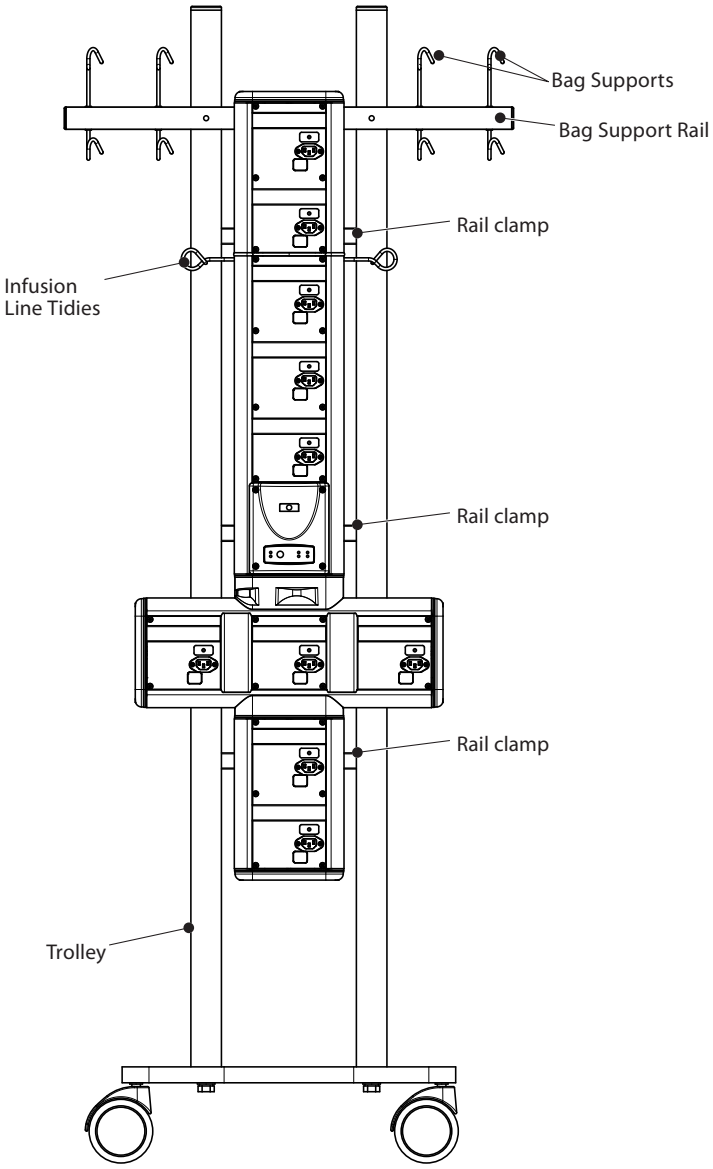
Base Module (3 MDI Tile Base)
Unit Front View



Rear View



Configuration 80203UNSxx-235, shown mounted on an Alaris® Trolley:



Features of the Workstation (continued)

System Fault Indication

Continuous monitoring of the power distribution and communications system integrity is performed by the Workstation. In the unlikely event that a system fault occurs whilst in use, the System Fault Indicator will be illuminated accompanied by an audible alarm. To avoid any possible interruption to the infusion, AC power to the pumps will be maintained on the MDI tile should a system fault be detected. The Workstation briefly illuminates the System Fault Indicator and activates the audible alarm each time the device is switched on.

Caution: If the System Fault Indicator fails to illuminate when the Workstation is switched on, remove the Workstation from service and contact a qualified service engineer.

Caution: Should a System Fault occur during use remove the Workstation from service as soon as practical and contact a qualified service engineer.

Power Input

The Workstation is powered from the mains supply through a standard IEC mains connector. When connected to the mains supply the AC Power indicator is illuminated. Both the Live and Neutral lines of the main supply are protected using fuses carried in a double fuse holder located on the mains inlet connector.

Warning: When connected to the mains supply, a three wire (Live, Neutral, Earth) supply must be used. If the integrity of the external protective conductor in the installation or its arrangement is in doubt, then the Workstation must not be used.

Battery Supply

The Workstation should normally be operated from the AC power supply. However, in the event of temporary loss of AC power, an internal power supply will provide approximately 20 minutes of additional operational time. AC Power should be re-applied as soon as possible. The Battery indicator illuminates whenever the Workstation is running from the internal battery. When the internal battery is depleted the Battery indicator will start to flash before the system automatically powers down. The battery is automatically charged whenever the Workstation is connected to the mains supply. As the Workstation is designed to operate from the AC power supply it will only power up when connected to the mains supply.

Features of the Workstation (continued)

AC Power Output to Infusion Pumps

The Workstation has its own power distribution circuit to supply mains voltage to the attached pumps. For safety, power is not applied to the MDI tile IEC connector until the pump is fully attached to the MDI tile. The AC power indicator on the infusion pump will also illuminate.

Warning: The MDI tile mains outlet connection is intended only for connection to a pump. NEVER attach any other equipment to the outlet connector.

The Workstation minimises the potential for a high peak in-rush currents when mains power is simultaneously applied to the pumps. When the Workstation is initially switched on, or when re-connected to the mains whilst operating from the internal battery, a small delay in the application of main power will occur between each MDI tile. This staggers the distribution of mains power to all pumps and therefore, reduces the peak in-rush current.

AC Power Output to a Second Workstation

The Workstation is fitted with an auxiliary mains outlet connection. When limited access to mains power exists, a second Workstation can be powered from this IEC mains outlet connector.

Caution: The auxiliary mains outlet connector is not switched and is live whenever mains power is applied to the Workstation.

Warning: To avoid exceeding the maximum permissible system earth leakage current of 500µA, the total number of pumps fitted on both Workstations may be determined from the following formula:

	52µA	x number of Alaris® GP Volumetric Pumps fitted
+	15µA	x number of Alaris® GW Volumetric Pumps fitted
+	30µA	x number of Alaris® Syringe Pumps fitted
+	90µA	x 2 Workstations
	Less than 500µA	

If in any doubt connect each Workstation to a separate mains supply.

Warning: The auxiliary mains outlet is intended only for connection to a second Workstation or an authorised CareFusion product. NEVER attach more than one Workstation or any other equipment to the outlet connector.

Alarm Location Beacon (where fitted)

A beacon is mounted on the upper face of the Workstation to assist with identifying the location of any pumps that have entered an alarm or warning state. When lit, the beacon colour matches that of the visual status indicator on the pumps; red for alarms and amber for warnings. The beacon flashes automatically whenever any pump attached to the Workstation enters the alarm or warning condition, and stops when the condition is cleared on the pump. The intensity of the Alarm Location Beacon is configurable using the Web Service. The Alarm Location Beacon automatically illuminates red then amber each time the Workstation is switched on.

The alarm location beacon is provided in order to allow pumps with active alarms or warnings to be easily located; it does not replace the alarm or warning on the pump which remains the principle indicator that the attention of a clinician is required.

Caution: If the Alarm Location Beacon fails to illuminate when the Workstation is switched on, suspect a fault with the beacon. Remove the Workstation from service and contact an approved engineer.

Note: Alarm beacon cannot be fitted to a 4 MDI Tile Horizontal Module.

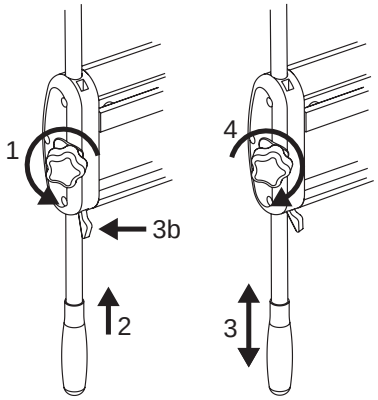
Features of the Workstation (continued)

Adjustable Height Bag Hangers (where fitted)

The 18 mm adjustable height pole has been designed as a convenient means of securing the fluid bags onto the Workstation. The pole supports a maximum load equivalent to 3 kg. The pole is held securely by a clamp and a slip catch. This gives additional flexibility when selecting the required height of the fluid bags. To operate the clamp:

1. Grip the handle at the lower end of the pole and carefully loosen the hand wheel.
2. Apply an upward pressure to the pole handle, this will release the locking lever and allow the pole to move freely.
3. a) **To increase the bag hanger height:** Continue pushing the pole upward to the required height. Once set, release the upward pressure on the pole, re-engaging the locking lever.

   b) **To reduce the bag hanger height:** Hold the locking lever in the released position and adjust the pole downward to the required height. Release the locking lever and release the upward pressure on the pole, re-engaging the locking lever.
4. Tighten the hand wheel to securely lock the pole into position.

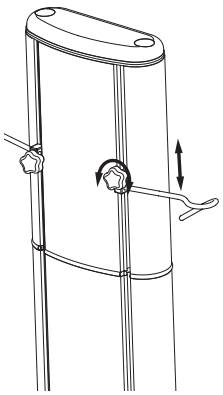


For configuration - 80203UNSxx-235/80203UNSxx-035, the adjustable bag support rail should be moved to accommodate the height recommended in the specific pump Directions For Use.

Infusion Line Tidies (where fitted)

To assist in the routing of infusion sets and syringe extension sets from the Workstation to the patient, line tidies can be attached to the rear of the Workstation. The infusion line tidies are height adjustable allowing positioning adjacent to both syringe and volumetric pumps, and may be mounted on the left or right hand side of the Workstation. To use the infusion line tidies:

1. Loosen the hand wheel and adjust to the desired position.
2. Hand tighten the hand wheel to secure the device.
3. Refit rubber strip.



Pole Mounting

A pole clamp mounting kit (1000SP00169) is available to assist with mounting the Workstation onto a pole assembly. When installed, the Workstation will mount to vertical poles with a diameter between 15 and 40mm. All configurations must be secured with at least two pole clamps. When five or more vertical tiles are used, ensure three pole clamps are used and that the pole clamps are distributed across the vertical tiles. Ensure all clamps are tightened firmly and securely.

Warning: Ensure the pole is capable of supporting a fully laden Workstation (see Product Specifications) prior to mounting.

Warning: Check that the pole clamp handle is in full working order before use.

Warning: The pole clamp should be used to mount the Workstation on fixed poles / overhead swing arm poles only.

Warning: People of a weak disposition should not attempt to use / tighten the pole clamp system.

Features of the Workstation (continued)

Mobile Trolley Mounting

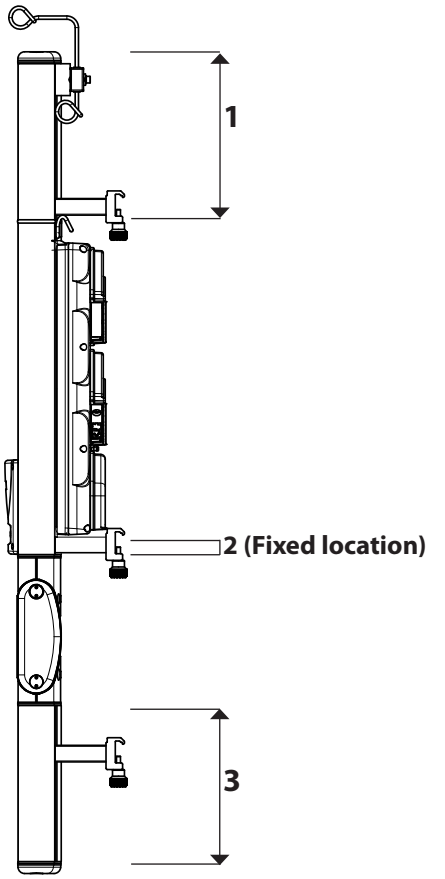
Use the mounting kit supplied with the Workstation to mount the device on a mobile trolley. For stability, when moving a trolley mounted Workstation between locations the following guidelines should be followed:

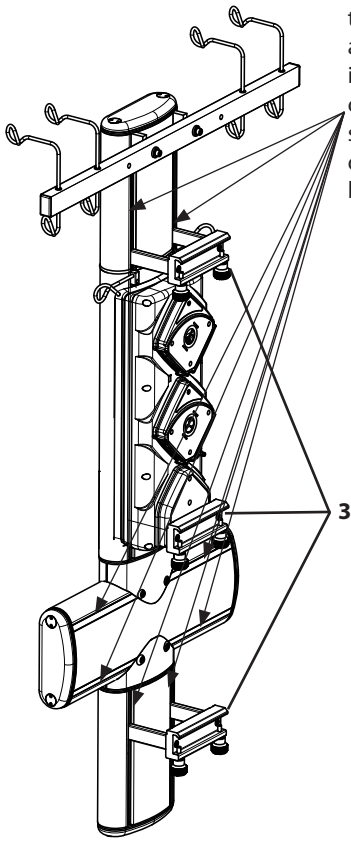
1. Remove all unnecessary fittings and handle the Workstation with care during any transportation.
2. Ensure IV fluid bags weighing no more than 1 kg are suspended from the adjustable height poles, and that the pole is in the lowest position possible.

Warning: Do not overload the trolley. To ensure stability follow the guidelines given in the Product Specification section.

Warning: The Workstation should not be fitted to any other mobile pole or drip stand unless the stability and strength of the whole assembly has been evaluated to IEC/EN60601-1.

Configurations where volumetric pumps are not located at the top require three separate rail clamps
Points 1,2 and 3 must always be located within the area shown.





The black rubber trim strips on the back of the Workstation are designed to prevent the ingress of liquids and other contamination. The Workstation should not be installed or operated without the strips being in place.

Equipment Rail Mounting

A mounting kit is supplied with each Workstation to assist with mounting of the device onto hospital equipment rails. When installed, the Workstation will mount to rectangular rails. Locate the mounting rails at the bottom and top of the vertical extrusion in order to fully support the Workstation on the hospital equipment rails. Adjust the position of the mounts to match the spacing between the equipment rails and tighten the knobs to secure the Workstation in place.

Warning: Any rail system for supporting medical devices must comply with BSEN 12218:1999. Ensure the rail is capable of supporting a fully laden Workstation (see Product Specifications) prior to mounting.

The Workstation has been designed to minimise the exposure of mating surfaces and all connectors to fluid ingress from leaking fluid bags and infusion lines mounted above and on the device. Mount the Workstation so as to minimise the collection or pooling of fluid in the device.

Warning: Do not orientate the Workstation with the mains inlet or outlets exposed in the event of a spill.

Warning: All configurations must be secured with at least two rail clamps. When five or more vertical tiles are used, ensure three rail clamps (as shown above) are used. Ensure all clamps are tightened firmly and securely.

80203UNSxx-235/80203UNSxx-035 requires three separate rail clamps.
Points 1,2 and 3 must always be located within the area shown.

Operating Precautions

Operating Environment

Users of the Workstation should read all instructions in this manual before using this medical device.

The Workstation is suitable for all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.

When setting up a Workstation, an assessment of any potential hazards associated with the routing of electrical leads and infusion lines should be made. Where appropriate, mitigations identified and implemented.

The Workstation should only be used with compatible CareFusion products and accessories and appropriate infusion bags and lines.

While being used for patient therapy, each Workstation should be dedicated to the care of a single patient. Where an auxiliary Workstation is used, this should be dedicated to the same patient as the primary Workstation to which it is connected.

This Workstation is not intended to be used in the presence of a flammable anaesthetic mixture with air or oxygen or nitrous oxide.

Electromagnetic Compatibility & Interference

This Workstation is protected against the effects of external interference, including high energy radio frequency emissions, magnetic fields and electrostatic discharge (for example, as generated by electrosurgical and cauterising equipment, large motors, portable radios, cellular telephones etc.) and has been tested to IEC/EN60601-1-2.

The Workstation is a CISPR II Group 1 Class A device. When Alaris® Infusion Pumps are attached and operational, the system becomes a CISPR II Group 1 Class A system.

This Workstation is a CISPR II Group 1 Class A equipment and uses RF energy only for its internal function in the normal product offering. Therefore, its RF emissions are very low and are not likely to cause any interference with the nearby electronic equipment. However, this Workstation emits a certain level of electromagnetic radiation which is within the levels specified by IEC/EN60601-2-24 and IEC/EN60601-1-2. If however the Workstation interacts with other equipment, measures should be taken to minimise the effects, for instance by repositioning or relocation.

The Workstation features an optional radio frequency IEEE 802.11b Wireless Local Area Network interface (RF card). When fitted, the Workstation must emit electromagnetic energy in order to perform its intended function. Nearby electronic equipment may be affected.

In some circumstances the Workstation may be affected by an electrostatic discharge through air at levels above 15kV; or by radio frequency radiation above 10V/m. If the Workstation is affected by this external interference the Workstation will remain in a safe mode and alerts the user by generating a combination of visual and audible alarms. Should any encountered alarm condition persist even after user intervention, it is recommended to replace that particular Workstation and quarantine the Workstation for the attention of appropriately trained technical personnel.

Portable and mobile RF communications equipment can affect other, nearby medical electrical equipment.

Hazards

The Workstation is heavy and poses a potential lifting hazard. Use caution when unpacking and installing the Workstation.

An explosion hazard exists if the Workstation is used in the presence of flammable anaesthetics. Exercise care to locate the Workstation away from any such hazardous sources.

Dangerous Voltage: An electrical shock hazard exists if the Workstation's casing is opened or removed. Refer all servicing to qualified service personnel.

When connected to an external power source, a three-wire (Live, Neutral, Earth) supply must be used. If the integrity of the external protective conductor in the installation or its arrangement is in doubt, the Workstation should not be used.

Do not open the RS232/Nurse Call protective covering when not in use. Electrostatic discharge (ESD) precautions are required when connecting RS232/Nurse Call. Touching the pins of the connectors may result in ESD protection failure. In order to prevent any potential failure generated by ESD close to or above 15kV, it is recommended that all actions must be taken by appropriately trained personnel and the pump should not be attached to the patient when connecting RS232/Nurse Call.

If this Workstation is dropped, subjected to excessive moisture, fluid spillage, humidity or high temperature, or otherwise suspected to have been damaged, remove it from service for inspection by a qualified service engineer. When transporting or storing the Workstation, use original packaging where possible, and adhere to temperature, humidity and pressure ranges stated in the Specifications section and on the outer packaging.

Data Communication Interfaces

The user should be familiar with the data communications interfaces available on the Workstation before attempting to connect the device to client / server systems. Erroneous connection of data communication cables will not damage the device, but may cause the Workstation to operate incorrectly until the error is fixed.

Caution: Electrostatic Discharge (ESD) precautions are required when connecting the data communications cables to the Workstation. Avoid touching the pins of the connectors as this may result in an ESD protection failure.

Nurse Call Interface

A nurse call interface is provided which is activated whenever any pump attached to the Workstation enters an alarm or warning condition, and stops when the condition is cleared on the pump. The Nurse Call Interface may be connected to operate in a normally open or normally closed contact position. Verify the Nurse Call is automatically activated each time the Workstation is switched on.

The Nurse Call interface on the Workstation allows a single connection point to a hospital Nurse Call system. This Nurse Call activates when a pump communicates an alarm or warning condition to the Workstation via the IrDA interface. The communication of such an alarm or warning condition could be interrupted if, for example, the pump was not correctly attached to the Workstation. CareFusion recommends that, where reliability of the Nurse Call interface is paramount, then connection is made from the Nurse Call system directly to the Nurse Call interface on the pump.

Caution: If the Nurse Call Interface fails to operate when the Workstation is switched on, suspect a fault with the interface. Remove the Workstation from service and contact a qualified service engineer.

Barcode Reader Interface (where fitted)

A barcode reader may be attached to the Workstation. The interface provided by the Workstation supplies power and a serial data connection to the barcode reader. The barcode reader is configured to support EAN type barcodes.

RS232 Serial Interfaces (where fitted)

The Workstation allows for the connection of a single RS232 device. This electrically isolated interface permits pumps with RS232 ports that are not compatible with the MDI tile interface, and other manufacturer's medical devices to be integrated into the Workstation.

An additional option provides connections to a further three RS232 devices.

Ethernet Interfaces (where fitted)

The Workstation may be used on a 10 Base-T/100 Base-Tx switched LAN. A DHCP client service allows the use of either fixed or dynamic network addressing of the Workstation. Similarly, a DNS client is provided. Configuration of these client services is through the Web Service. The Ethernet connection to the Workstation is electrically isolated.

Wireless Ethernet Interface (where fitted)

The Workstation may be used with an IEEE 802.11b 2.4 GHz wireless LAN. SSID wireless group selection is supported, as is data encryption through the use of 128 bit WEP keys. Configuration of the Wireless Ethernet Interface is through the Web Service.

The integrated diversity dipole antenna is built into a wireless LAN PCMCIA card fitted within the Workstation.

Auxiliary Interface (where fitted)

Where the use of a single, large Workstation is not practical, two smaller Workstations may be linked together to behave as a single Workstation. To link the Workstations:

1. Ensure that only one Workstation is fitted with the Communications Upgrade (options 2 or above) and connected to the external client.
2. Link the two Workstations together using a standard CAT5e Ethernet cable inserted into the Auxiliary connector on each Workstation.
3. The infusion data from each Workstation will be automatically integrated forming a single connection to the external client.

Caution: The System Fault Indictor will be activated if any device other than an appropriately configured Workstation is fitted into the Auxiliary Connector.

Data Access

The Workstation retains all internal infusion data in an XML representation; this data is translated by applications on the Workstation into the appropriate format for the external client. Access to this data will depend upon the software applications installed on the Workstation.

Data confidentiality, integrity, accountability and dependency are managed through connection specific software applications operating on the Workstation. Refer to the Web Service Help Utilities for specific information on the software available.

Web Service

The standard external interface on the Workstation is the Web Interface. This is hosted by a Web service and permits:

- Configuration of all interfaces and software.
- Display of all current infusion data
- Viewing internal event logs generated by the Workstation
- Access to help utilities for the software installed.

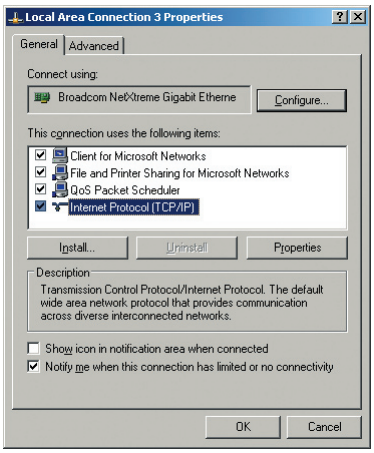
To access the Web Service connect to the Workstation using a standard web browser such as Microsoft Internet Explorer. The factory default IP address of the Workstation is 192.168.1.1; the HTTP server operates on Port 80 of the Workstation.

The Asena® Gateway Workstation employs the IP address range 192.168.0.1 to 192.168.0.255 for internal purposes. Therefore, it is incompatible with external networks that use this IP address range.

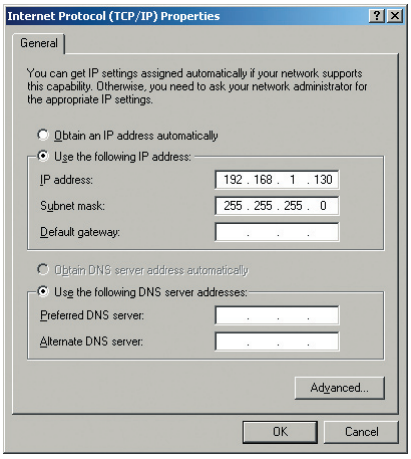
Caution: The Workstation should only be configured through the Web Service provided. Any attempt to access the operating system, modify any system or applications files, change registry settings or install software not licenced by CareFusion, may cause the Workstation to operate incorrectly.

Web Service Configuration

1. Connect the PC to the Ethernet Interface on the Workstation using a CAT5 crossover cable.
2. On the PC, select Start > Settings > Control Panel > Network Connections and double click the Local Area Connection icon.
3. Select the General tab and click on Properties.

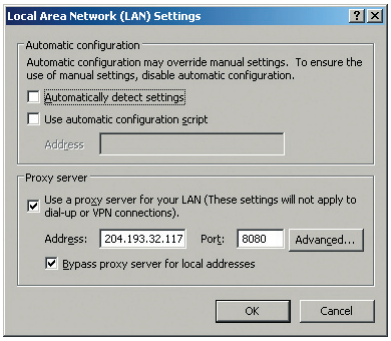


4. Select Internet Protocol (TCP/IP) and click on Properties.
5. Set the IP address to the Workstation default, 192.168.1.1, and the Subnet Mask, 255.255.255.0 and click OK. The PC may need to be restarted.



6. If the web browser connects to the ethernet via a proxy server, the proxy server address will need to be disabled. In Internet Explorer, select Tools > Internet Options.

7. Select the Connection tab and click on LAN Settings. Note down the details of the proxy server and uncheck the 'Use a proxy server for your LAN' box.



8. Access the Web Service via http://192.168.1.1.

Certain Alaris® GW Volumetric Pump configurations will identify themselves as a GE pump and be displayed accordingly on the web interface.

The infusion data of a pump fitted while on hold is only updated on the web interface once an activity (such as setting the pump to infuse) has occurred, the status is properly reported.

Operation of Workstation

Switching On

After initially switching on the Workstation, any services and applications running on the device may take up to 30 seconds to become fully operational.

1. Connect the AC power cord from the mains supply to the IEC inlet socket on the Workstation
2. Verify the AC Power indictor is illuminated.
3. Depress the ⏻ key once to switch the Workstation on.
4. Verify the Workstation emits a brief audible tone
5. Verify the Fault indicator illuminates briefly and is then extinguished
6. Verify the Alarm Location Beacon (where fitted) illuminates red then amber and is then extinguished
7. Verify the ON Status indictor is illuminated
8. Following correct power up the '**A**' and '**B**' Status indicators will flash (only applicable when the optional communications upgrade is fitted - options 2 and above)

Caution: Do not switch off the Workstation during this initial 30 second period.

Caution: If any of the verification checks fails when the Workstation is switched on, suspect a fault. Remove the Workstation from service and contact a qualified service engineer.

Switching Off

Depress the ⏻ key and hold for 1 second to switch the Workstation off.

Resetting the Workstation

In the unlikely event that the Workstation needs to be reset, depress and hold the ⏻ key for at least 4 seconds until the On Status Indicator is extinguished, release the key then depress again to switch the Workstation back on.

Caution: If after resetting the Workstation it still fails to operate correctly, remove the device from service and contact a qualified service engineer.

Fitting a Pump

1. Holding the pump horizontally, push the pump into the MDI tile. If correctly positioned, the rotating cam will "click" into position on the rectangular bar, and the mains outlet will slot into the inlet on the pump. Ensure that the cam lever is in the return position.
2. Check that the AC Power indictor on the pump is illuminated. Neither AC Power nor data communications will be available until the pump is correctly located on the MDI tile.

When using volumetric pumps with the Workstation, it is recommended that, where possible infusion bags be located on a hanger directly above the pump with which they are being used. This minimises the potential for confusion of lines when multiple volumetric pumps are used.

Caution: The location of the pumps fitted to the Workstation (above or below the patient) may pose a risk of siphoning or over pressure. Please refer to the appropriate DFU for further details.

Caution: Before starting an infusion with a volumetric pump check that the infusion set in the pump is connected to the correct bag.

Removing a Pump

1. Holding the pump with both hands, push the release lever on the right hand side of the pump backwards.
2. Keeping the lever pushed back, pull the pump horizontally towards you.
3. Check that the red LED indicator on the MDI tile is extinguished after removal of the pump.

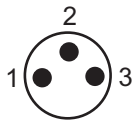
Caution: If the indicator in the MDI tile is illuminated when no infusion pump is attached to the MDI tile, suspect a fault with the MDI tile. Remove the Workstation from service and contact an approved service engineer.

Data Communications Interface Specifications

Nurse Call Interface

Workstation Connector
Plug Type: Binder 09 0978 00 03
Mating Connector
Socket Type: Binder '710' series 99 0975 100 03
Cable Type: Max. cable sheath diameter 4mm.
Isolation: 1.5kV
Rating: 30V/1A

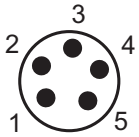
Description
Pin 1: NC_COM
Pin 2: NC_NC
Pin 3: NC_NO



Barcode Reader Interface (where fitted)

For use with CareFusion supplied barcode reader only.
Workstation
Connector Type: Binder 09 0998 00 05
Cable Type: N/A

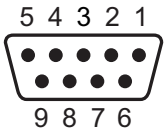
Description
Pin 1: +5V
Pin 2: TxD
Pin 3: GND
Pin 4: RxD
Pin 5: SENSE



Serial RS232 Interface (where fitted)

Connector Type: D type - 9 pin (female)
Cable Type: Standard RS232 Cable: Length <1.5m [1,3]
Isolation: 1.5kV
Data Rate: 57.6k baud

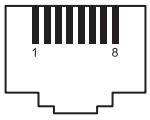
Description
Pin 1: N/C
Pin 2: RXD
Pin 3: TXD
Pin 4: N/C
Pin 5: GND
Pin 6: N/C
Pin 7: RTS
Pin 8: CTS
Pin 9: N/C



Ethernet Interface (where fitted)

Connector Type: RJ45
Cable Type: CAT5e Ethernet Cable: Length >1.5m [1]
Isolation: 1.5kV
Data Rate: 10/100Mbps

Description
Pin 1: TxD+
Pin 2: TxD–
Pin 3: RxD+
Pin 4: N/C
Pin 5: N/C
Pin 6: RxD–
Pin 7: N/C
Pin 8: N/C



Wireless Ethernet Interface (where fitted)

Antenna:
Type: Integrated Diversity Dipole Antenna

RF Card:
Frequency Range: ISM Band 2.4 to 2.4897MHz
Modulation: CCK
Available
Transmit Power: 100mW (20dbm)

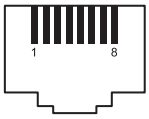
Certification of the RF card:

The wireless LAN PCMCIA card installed in the Workstation is in compliance with the essential requirements and other relevant provisions of Radio and Telecom Terminal Equipment Directive 1999/5/EC.

Auxiliary Interface

Connector Type: RJ45
Cable Type: CAT5e Ethernet Cable: As required [2]
Isolation: 1.5kV

Description
Pin 1: Tx+
Pin 2: Tx–
Pin 3: Rx+
Pin 4: N/C
Pin 5: N/C
Pin 6: Rx–
Pin 7: N/C
Pin 8: N/C



NOTES:

[1] Assumes client equipment is non-medical equipment and outside of the patient environment; may be less than 1.5m if the client equipment is medical electrical equipment in compliance with EN 60601.

[2] Workstation may be used anywhere inside the patient environment.

[3] Either a cross-over or straight through RS232 cable will be required. Refer to the Directions for Use of the device to be connected for cable information.

Product Specifications

Electrical:

⚠ Protection Against Electrical Shock:
Class I

Supply Voltage:
115-230V, ~50-60Hz

Rating:
460VA (Maximum)

Fuses:
2 x 4A I^2t rating: 300A^2/Sec, 250V (20 x 5mm) Bussmann GMD-4A
Part No. 0000EL00949
Use only CareFusion recommended parts.

Mains Outlets:
to MDI Tile: 115-230V, ~50-60Hz, 60VA
to second Workstation: 115-230V, ~50-60Hz, VA: See table.

Protection against fluid ingress:
IPX1 - Protected against vertically falling drops of water.

Battery

Type:
Nickel Metal Hydride

Charge time:
2½ hours to 100% charge

Operating time:
20 minutes

Web Service (where fitted):

Default IP Address:
192.168.1.1

Web Browser:
Internet Explorer Version 6; Windows XP or 2000 Operating System

Environmental

	Operating	Transport and Storage
Temperature:	+5°C - +40°C	-20°C - +50°C
Humidity:	20% - 90%	15% - 95%
Atmospheric Pressure:	700 - 1060hPa	500 - 1060hPa

Classification:

Continuous Operation

Regulatory Compliance:

Complies with IEC/EN60601-1, IEC/EN60601-1-1, IEC/EN60601-1-2.

CE

Physical:

⚠

Configuration[1]	Bag Supports	Height (mm)[2]	Width (mm)	Depth (mm)	Maximum Weight (kg approx.)		Trolley Compatible (80083UN00-00)[5]	Alaris® Trolley Compatible (80203UNS00-00)[6]	VA Rating[4]
					Unladen	Laden[3]			
80203UNSxx-30	-	536	170	155	5.1	14	✓	✓	100
80203UNSxx-32	2	780	348	155	8.7	25.5	✓	✓	220
80203UNSxx-33	3	780	514	155	11.8	30.5	✓	✓	280
80203UNSxx-34	2/2	780	710	155	14.1	36.5	✓	✓	300
80203UNSxx-50	-	771	170	155	6.2	21.5	✓	✓	180
80203UNSxx-52	2	1015	348	155	10.8	32.5	✓	✓	260
80203UNSxx-53	3	1015	514	155	12.9	38	✓	✓	320
80203UNSxx-54	2/2	1015	710	155	15.2	43.5	✓	✓	380
80203UNSxx-70	-	1016	170	155	9.8	28.5	✓	✓	240
80203UNSxx-72	2	1260	348	155	14.4	40	✓	✓	300
80203UNSxx-73	3	1260	514	155	16.5	45	✓	✓	360
80203UNSxx-74	2/2	1260	710	155	18.8	51	✓	✓	400
80203UNSxx-92	2	1500	348	155	13.3	45.8	×	✓	440
80203UNSxx-035	-	1064	485	155	13	39	×	✓	
80203UNSxx-235	-	1240	485	155	14.5	45.5	×	✓	360

[1] xx denotes the connectivity option - 01, 02 or 03.

[2] Height of the Workstation with bag supports in the lowered position where appropriate. Bag supports can extend by a further 500mm above the Workstation.

[3] Includes pumps and 1l fluid bags on each bag support.

[4] Total VA Rating for two connected Workstations should not exceed 460VA. (includes combinations of pumps within leakage current limits)

[5] Installation should be as low as possible. The mounting height should not exceed 160cm from the ground to the top of the Workstation.

[6] Installation should be as low as possible. Refer to 1000PB01717 latest issue for maximum mounting heights.

Maintenance

Routine Maintenance Procedures

To ensure that this Workstation remains in good operating condition, it is important to keep it clean and carry out the routine maintenance procedures described below. All servicing should only be performed by a qualified service engineer with reference to the Technical Service Manual (TSM 1000SM00015).
Circuit diagrams and components parts lists and all other servicing information which will assist the qualified service engineer in performing repair of the parts designated as repairable are available upon request from CareFusion.

If the Workstation is dropped, damaged, subjected to excessive moisture or high temperature, immediately take it out of service for examination by a qualified service engineer.

All preventative and corrective maintenance and all such activities shall be performed at a compliant work place in accordance with the information supplied. CareFusion will not be responsible should any of these actions be performed outside the instructions or information supplied by CareFusion.

Interval	*Routine Maintenance Procedure*
When loading pumps	Check that each pump is properly located on its electrical connectors and is mechanically locked into position.
When removing pumps	Check that the red LED turns OFF when the pump is removed. If the LED stays ON, the Workstation should be serviced by a qualified service engineer.
As per Hospital Policy	Thoroughly clean external surfaces of the equipment before and after prolonged periods of storage.
At least once per year (Refer to TSM for identification of parts)	• Inspect AC outlets, communication connectors and the AC inlet for damage. • Perform electrical safety checks. The complete unit leakage current must be measured. If more than 500µA the equipment should not be used, but should be serviced by a qualified service engineer.

Please refer to Technical Service Manual for calibration procedures. The units of measurement used in the calibration procedure are standard SI (The International System of Units) units.

Replacing the AC Fuses

If the pumps fitted to the Workstation continually display the battery symbol and the AC power indicator light does not illuminate when the pump is connected to the AC power supply and switched ON, either the power supply fuse in the AC mains plug (if fitted) or, the mains fuses of the Workstation have blown.
First check the power supply fuse in the AC mains plug, if the AC power indication light does not illuminate proceed to check the Workstation mains fuses. Switch the power OFF and disconnect the Workstation from the AC power supply.
It is recommended that only a qualified service engineer replaces the AC fuses. For further information regarding the replacement of internal AC fuses refer to the Technical Service Manual.

If the fuses continue to blow, suspect an electrical fault and have the Workstation and power supply checked out by a qualified service engineer.

Cleaning and Storage

Periodically clean the Workstation by wiping over with a lint free cloth lightly dampened with warm water and a standard disinfectant / detergent solution.
If the Workstation is to be stored for an extended period it should be first cleaned. Store in a clean, dry atmosphere at room temperature and, if available, employ the original packaging for protection.

Before cleaning always switch the Workstation OFF and disconnect from the AC power supply. Never allow liquid to enter the casing and avoid excess fluid build up on the Workstation. Do not use aggressive solvents or abrasive cleaning agents as these may damage the exterior surface of the accessory. Do not steam autoclave, ethylene oxide sterilise or immerse this Workstation in any fluid.

Please contact your local CareFusion affiliate office or distributor for full details on approved cleaning agents.

Disposal

Information on Disposal for Users of Waste Electrical & Electronic Equipment

This ⊠ symbol on the product and/or accompanying documents means that used electrical and electronic products should not be mixed with household waste.
If you wish to discard electrical and electronic equipment, please contact your CareFusion affiliate office or distributor for further information.
Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

Information on Disposal in Countries outside the European Union

This symbol is only valid in the European Union. The product should be disposed of taking environmental factors into consideration. To ensure no risk or hazard, remove the internal rechargeable battery and the Nickel Metal Hydride battery from the control board and dispose of as outlined by the local country regulations. All other components can be safely disposed of as per local regulations.

Products and Spare Parts

Alaris® Infusion System

Range of products in the Alaris® Infusion System product family are:

Part Number	Description
80013UN01	Alaris® GS Syringe Pump
80023UN01	Alaris® GH Syringe Pump
80033UND1	Alaris® CC Syringe Pump
80043UN01	Alaris® TIVA Syringe Pump
80053UN01	Alaris® PK Syringe Pump
80033UND1-G	Alaris® CC Syringe Pump with Guardrails® Safety Software
80023UN01-G	Alaris® GH Syringe Pump with Guardrails® Safety Software
80263UN01	Alaris® GP Volumetric Pump
2504xxxx1[1]	Alaris® GW Volumetric Pump
80203UNS01-xxx[2]	Auxiliary Alaris® Gateway Workstation (option 1)
80203UNS02-xxx[2]	Alaris® Gateway Workstation (option 2)
80203UNS03-xxx[2]	Alaris® Gateway Workstation wireless option kit (option 3)
80203UNS00-00	Alaris® Trolley

[1] Contact local customer services representative to obtain language specific part number.

[2] Contact local customer services representative to obtain configurations availability and part numbers.

Spare Parts

A comprehensive list of spare parts for this Workstation is included within the Technical Service Manual. The Technical Service Manual (1000SM00015) is now available in electronic format on the World Wide Web at :

www.carefusion.com/alaris-intl/

A username and password are required to access our technical manuals. Please contact local customer services representative to obtain login details.

Part Number	Description
1000SP00605	Internal Battery Pack
134748	AC Power Lead - UK
0000EL00938	AC Power Lead - European

Service Contacts

For service contact your local Affiliate Office or Distributor.

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Document History

Revision	CO Number	Date
1	9685	November 2009

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EC REP CareFusion U.K. 305 Ltd., RG22 4BS, UK

1000DF00422 Issue 1

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